



FIG. 2

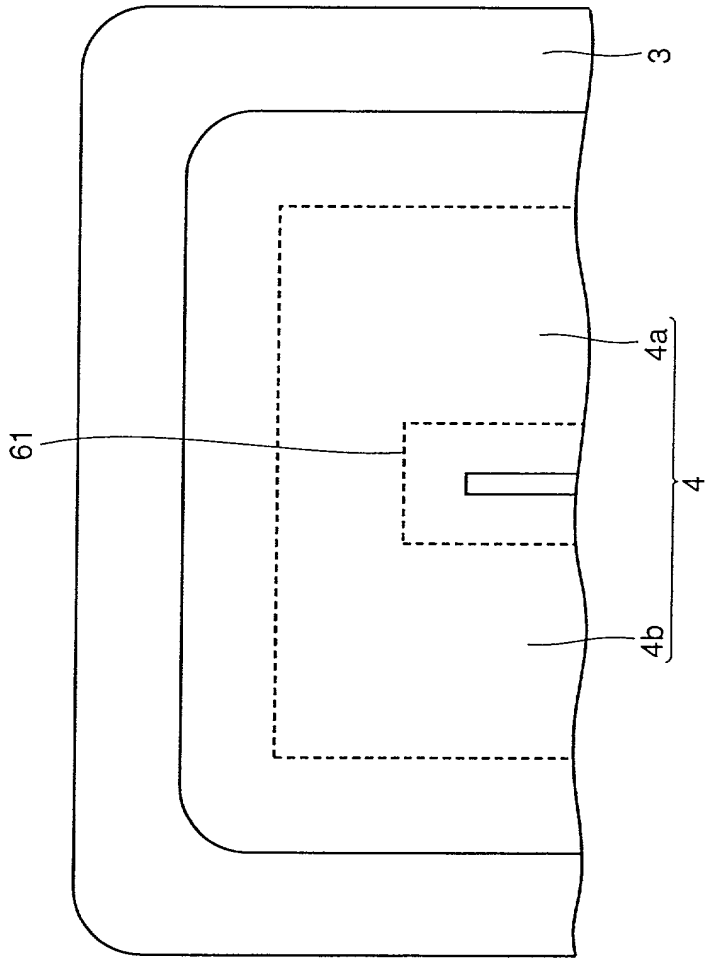


FIG. 3

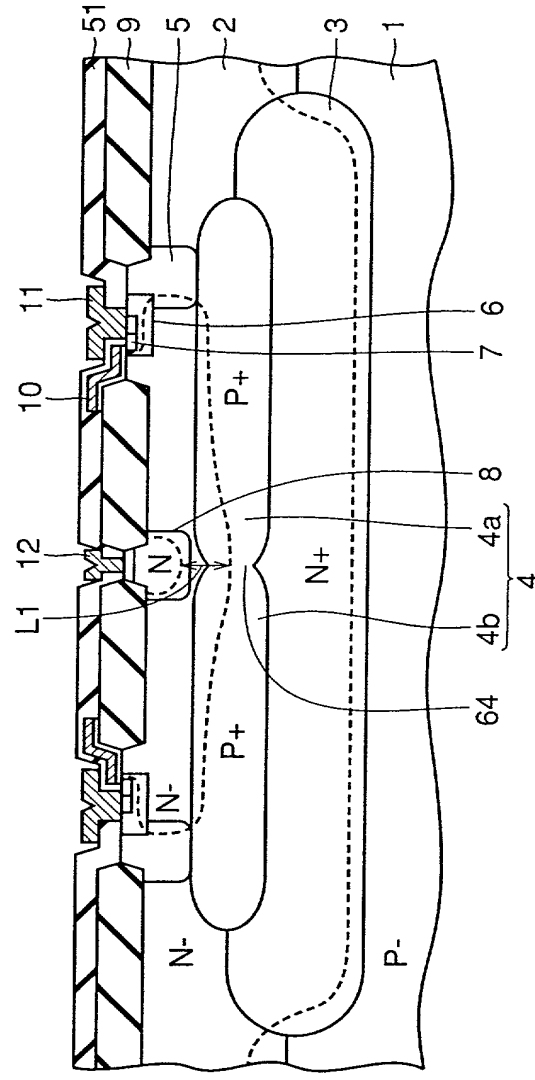


FIG. 4

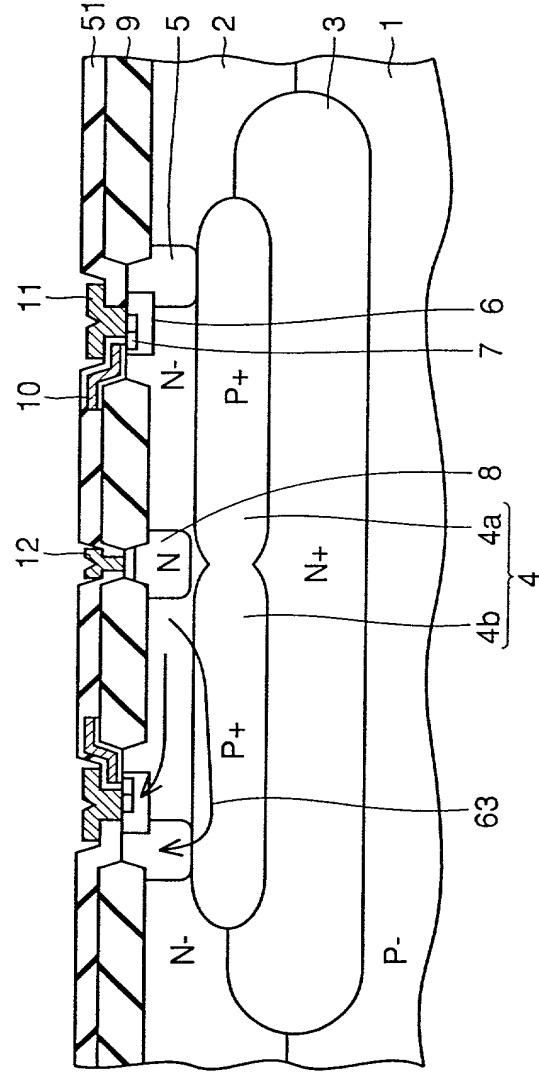


FIG. 5

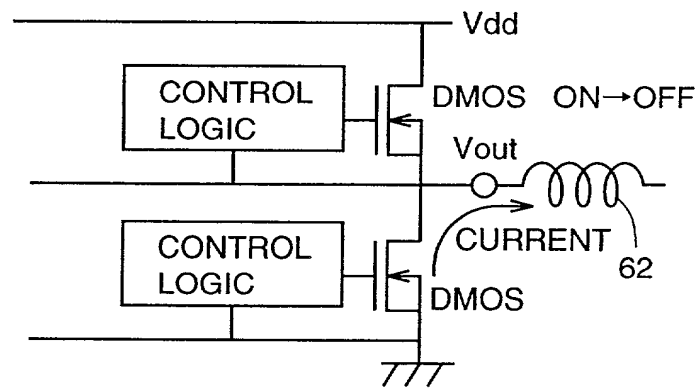


FIG. 6

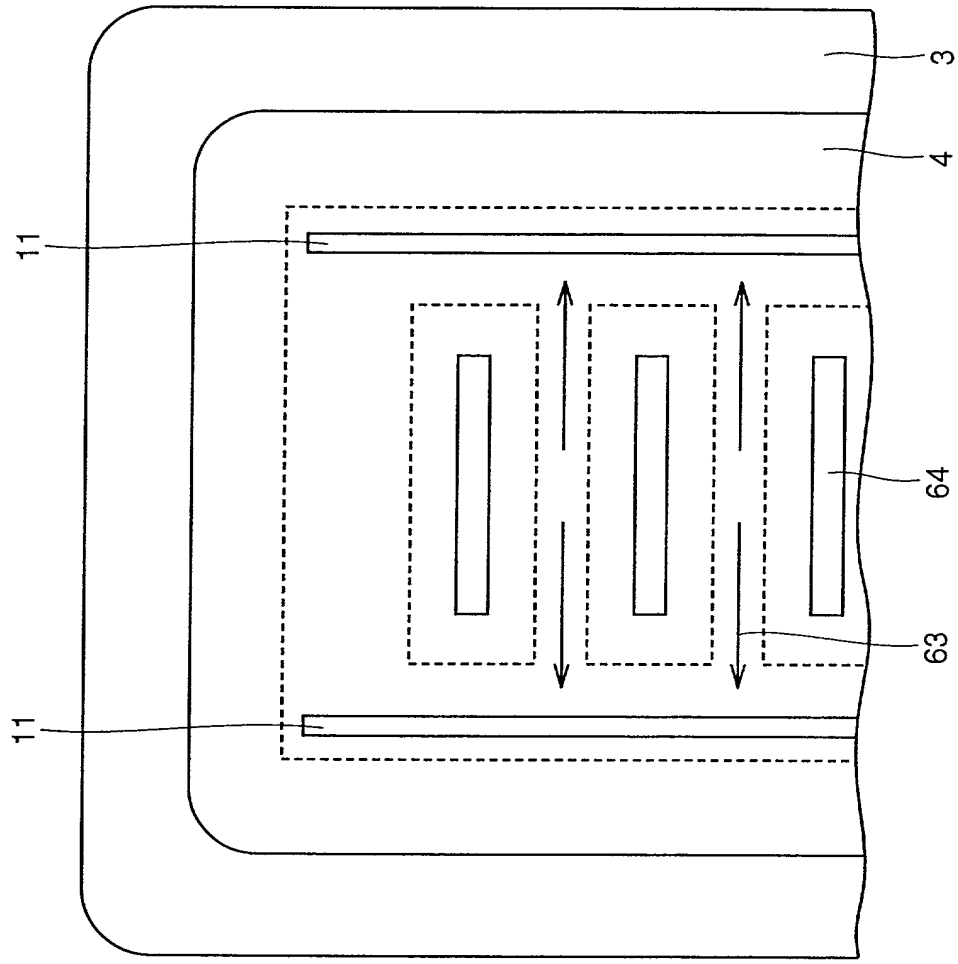
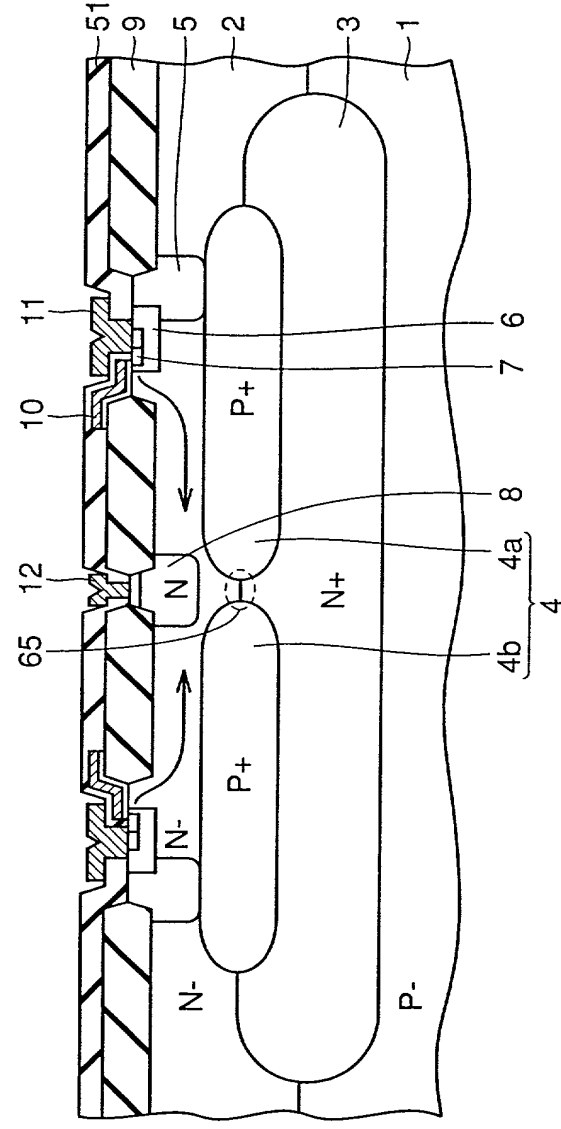


FIG. 7



This diagram shows a cross-sectional view of a semiconductor device. A substrate (1) contains a large P-type region (P-) and two smaller P-type regions (P+) separated by N-type regions (N-). The P+ regions are labeled 4a and 4b. Above the substrate, there is a trench structure. The trench walls are labeled 2 and 3. The trench bottom is labeled 5. The trench is filled with a material (6) and has a top layer (7). The trench is surrounded by a layer (8). The trench is also labeled 10, 11, and 12. The trench is filled with a material (9) and has a top layer (51).



FIG. 9

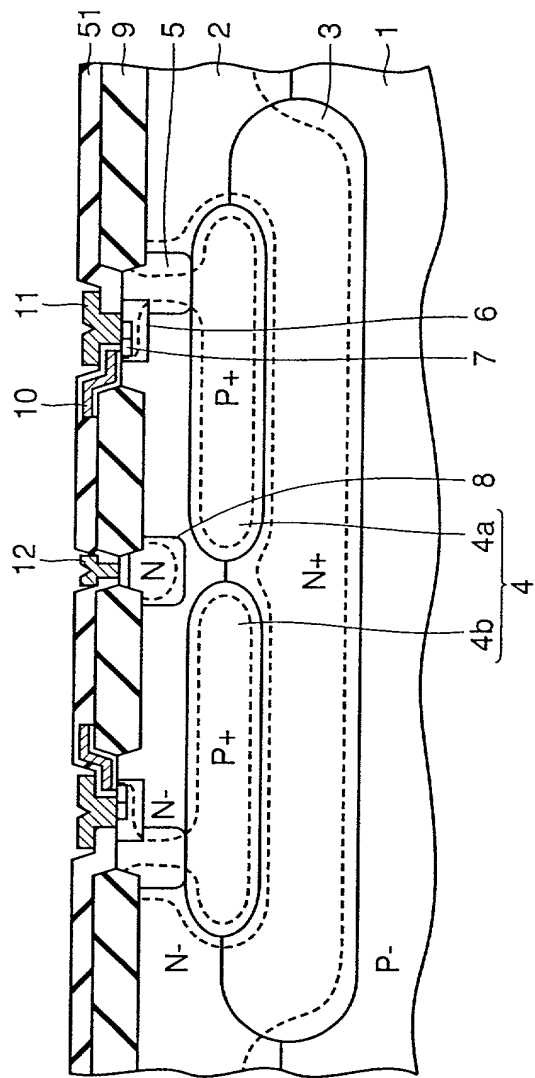


FIG. 10

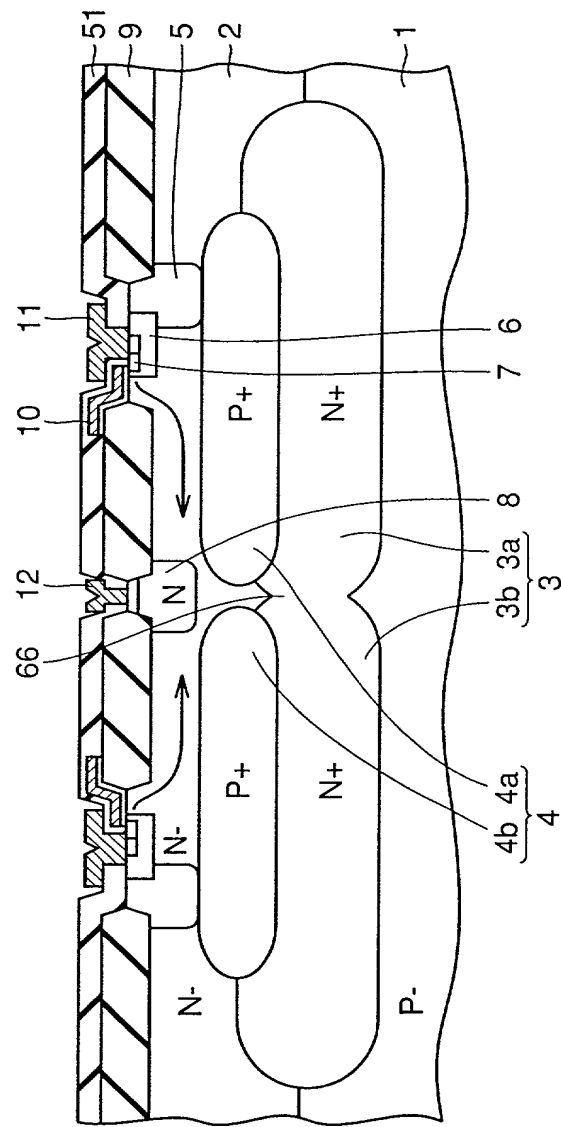


FIG. 11

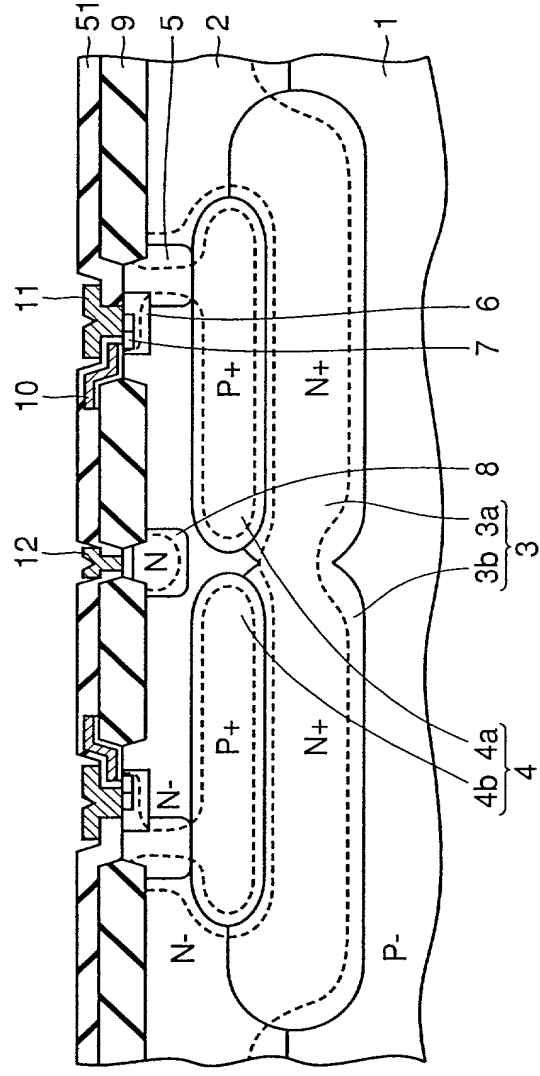


FIG. 12

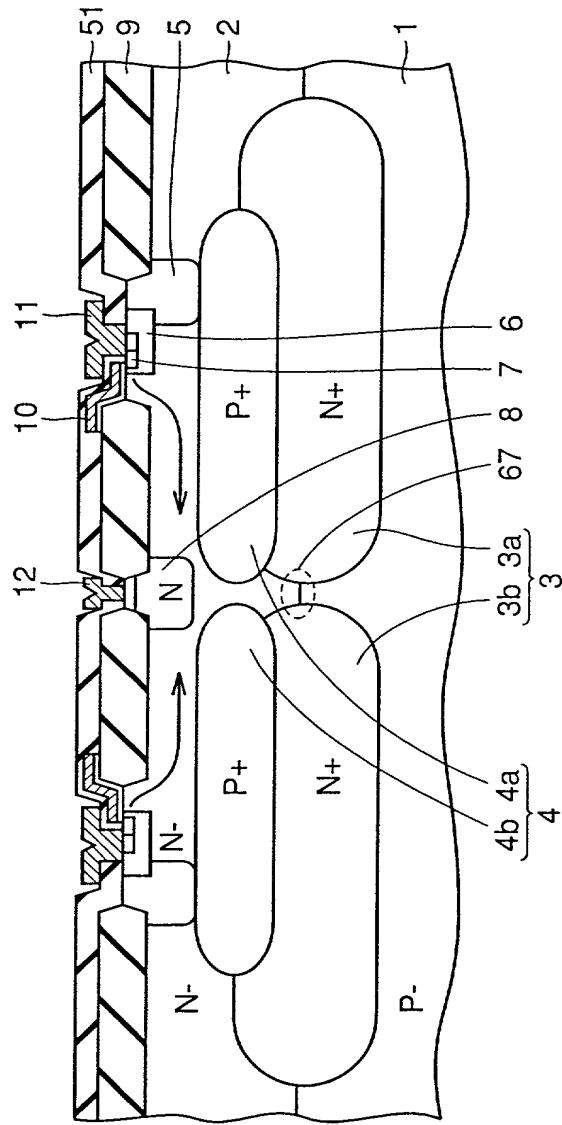


FIG. 13

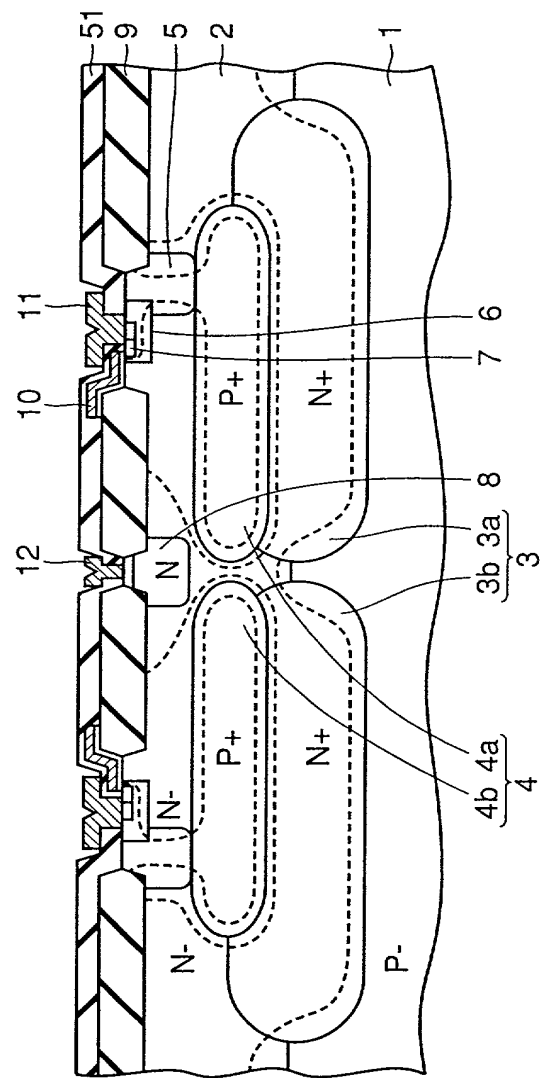




FIG. 15

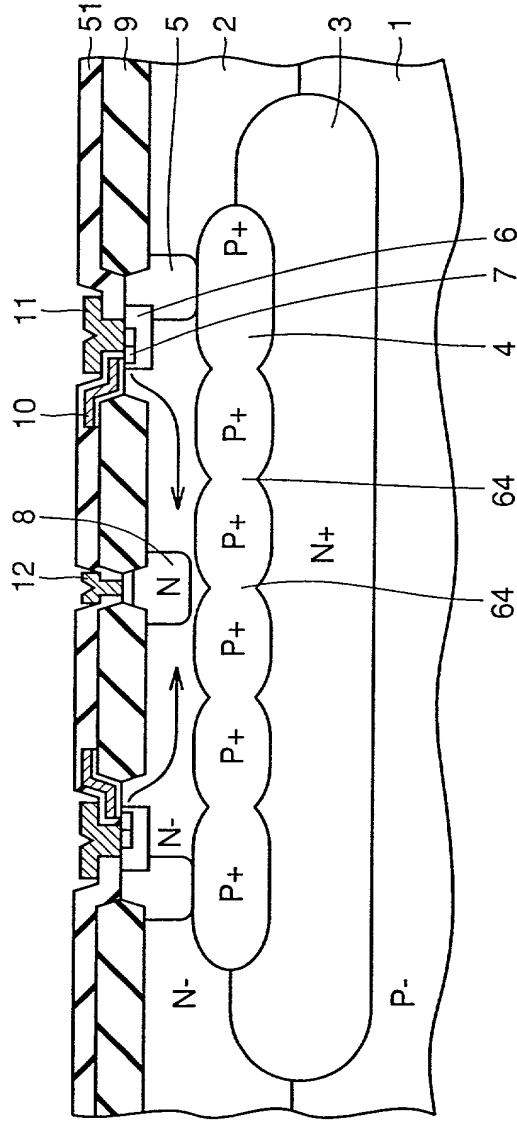


FIG. 16

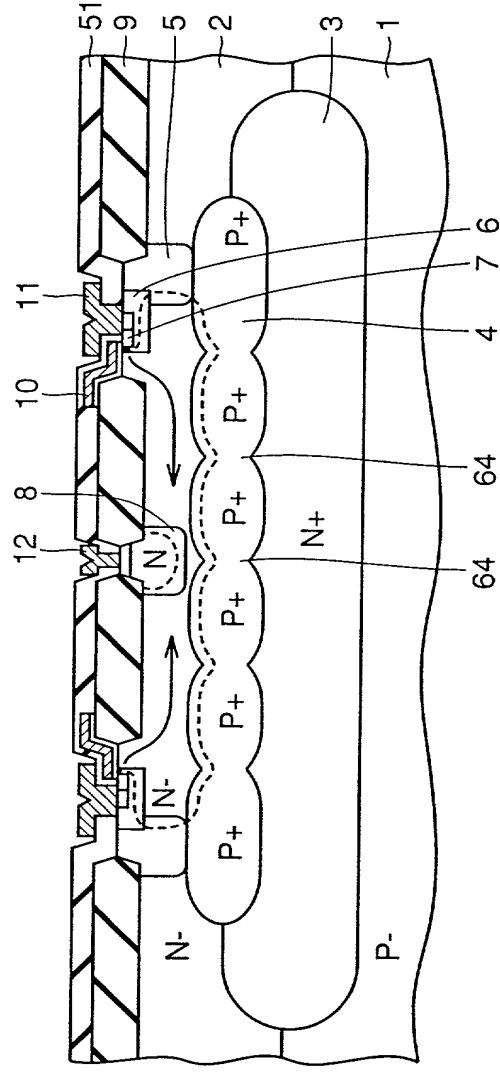




FIG. 17

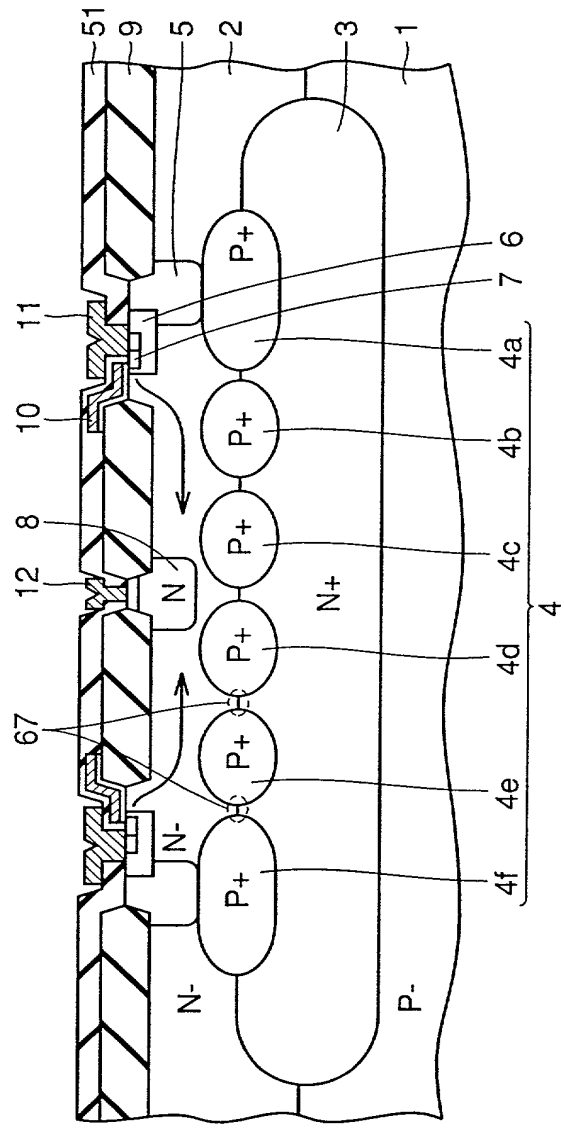


FIG. 18

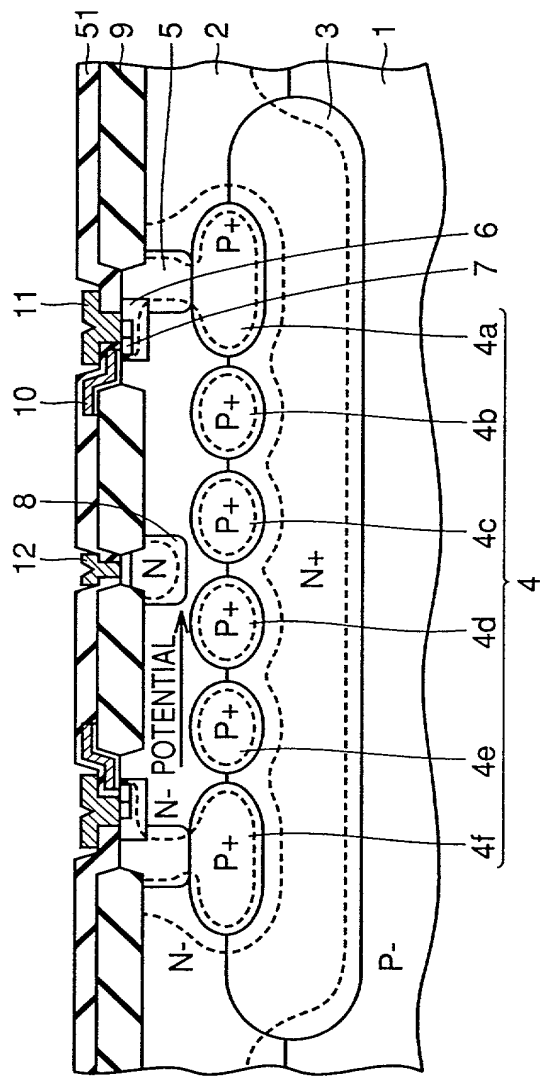


FIG. 19

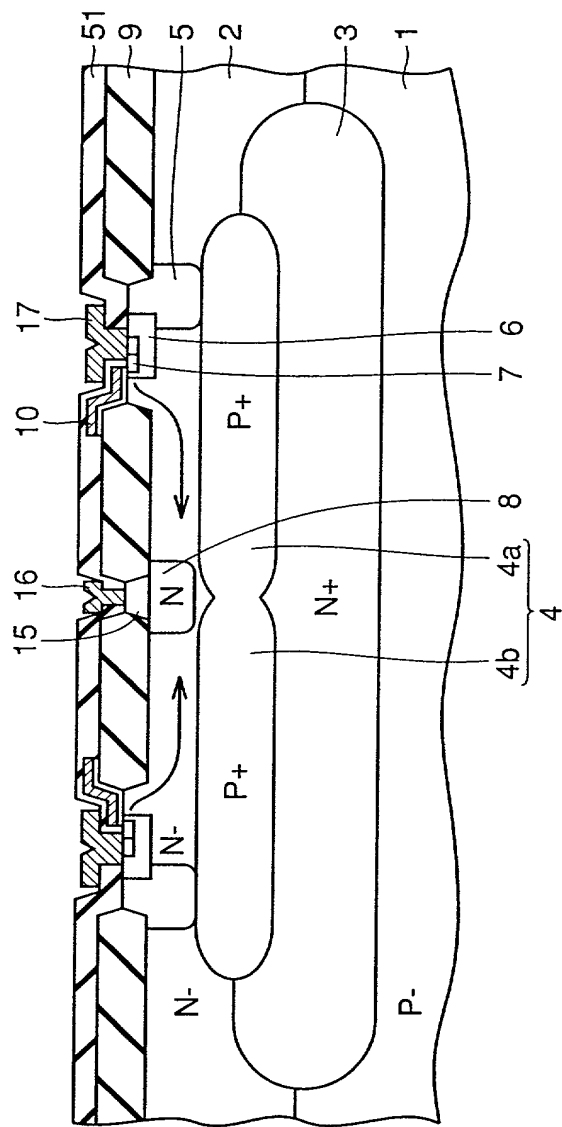


FIG. 20

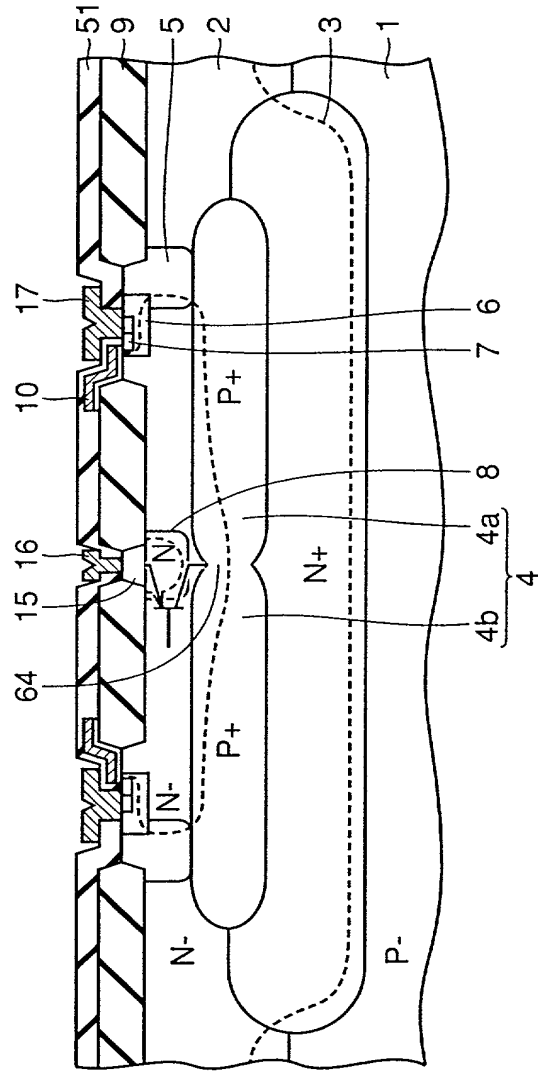


FIG. 21

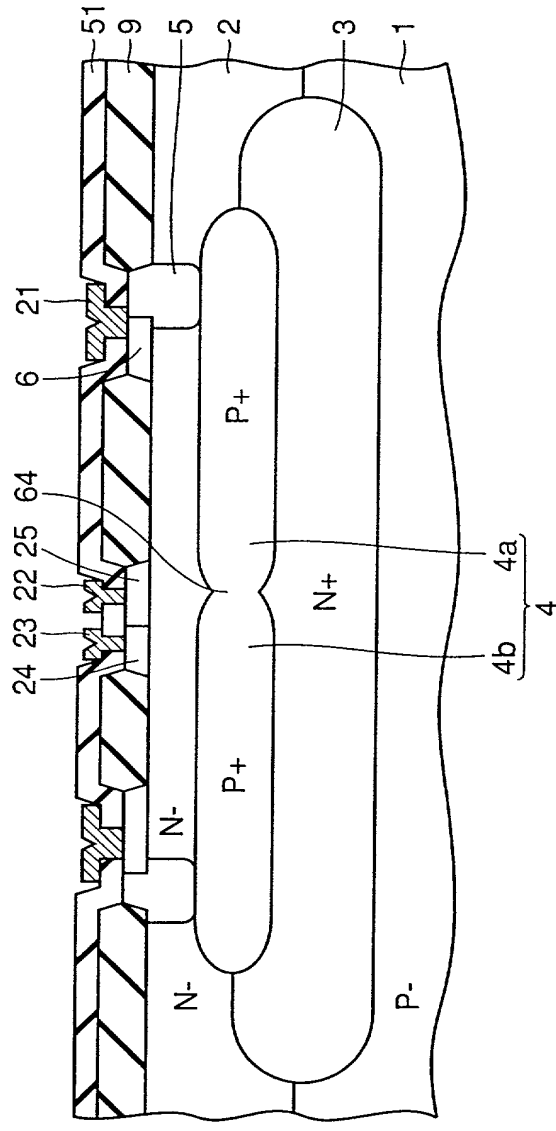




FIG. 23

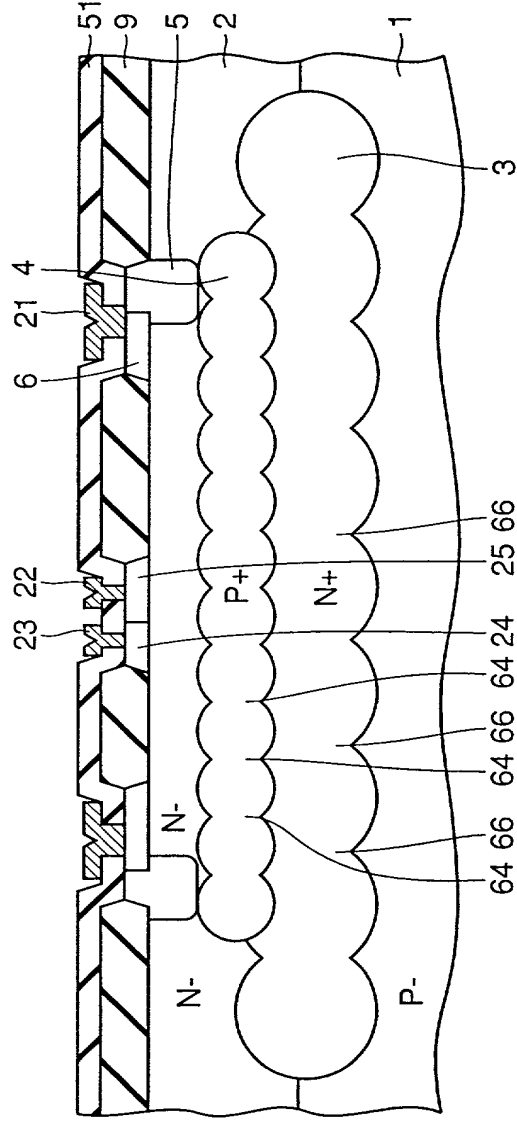


FIG. 24

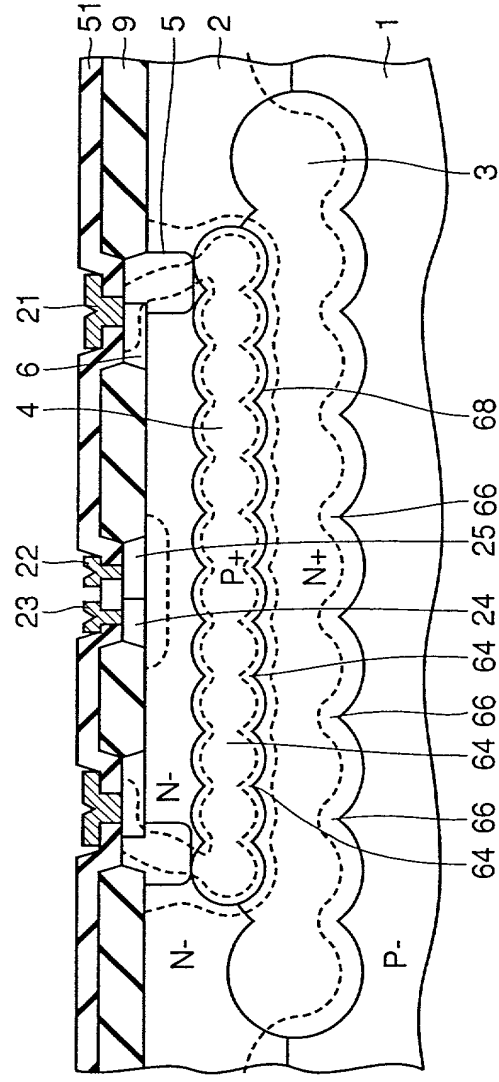




FIG. 25

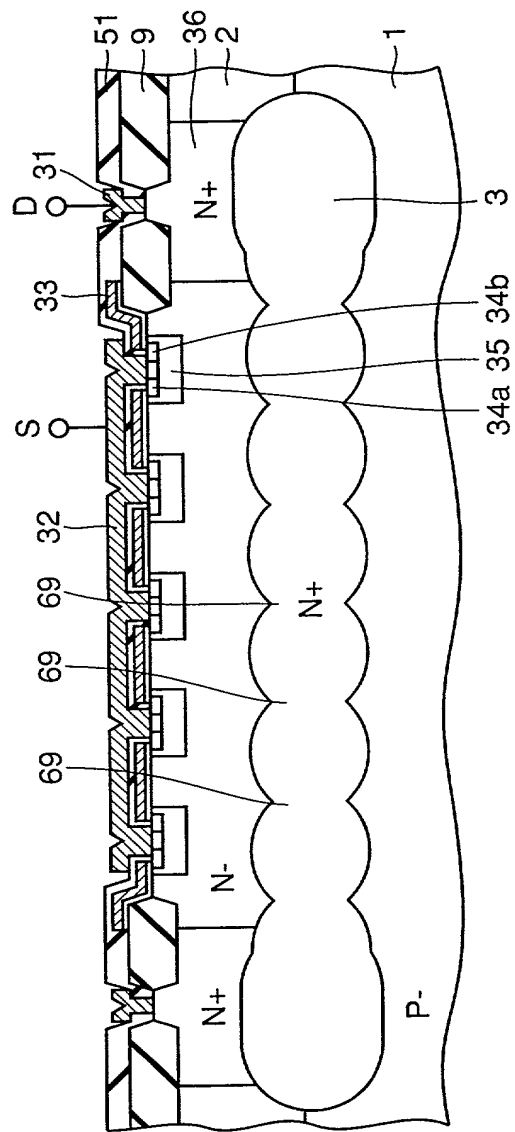


FIG. 26

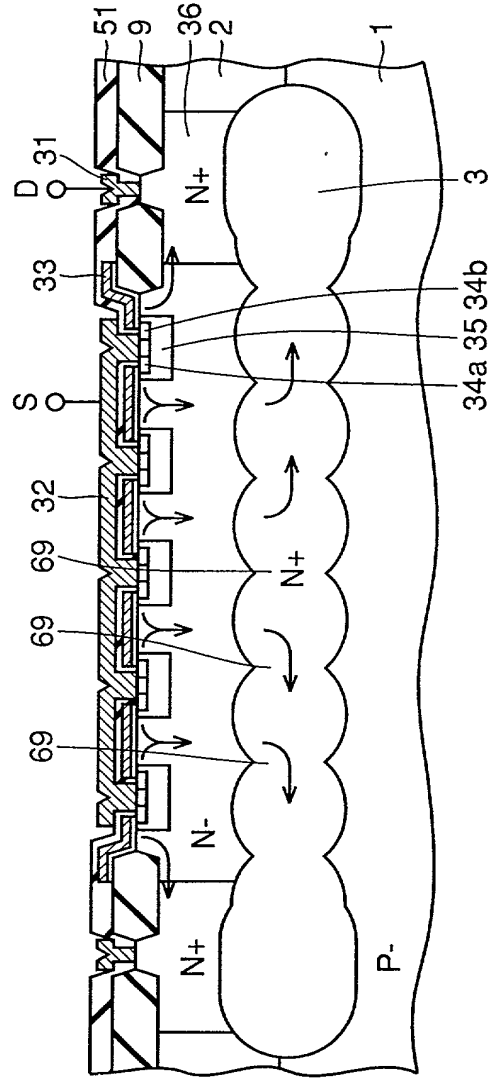


FIG. 27

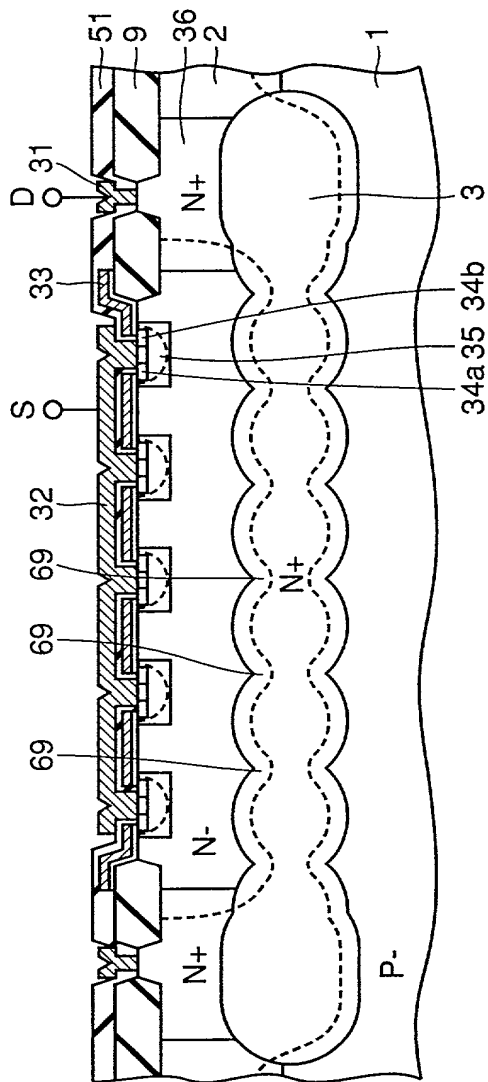




FIG. 29

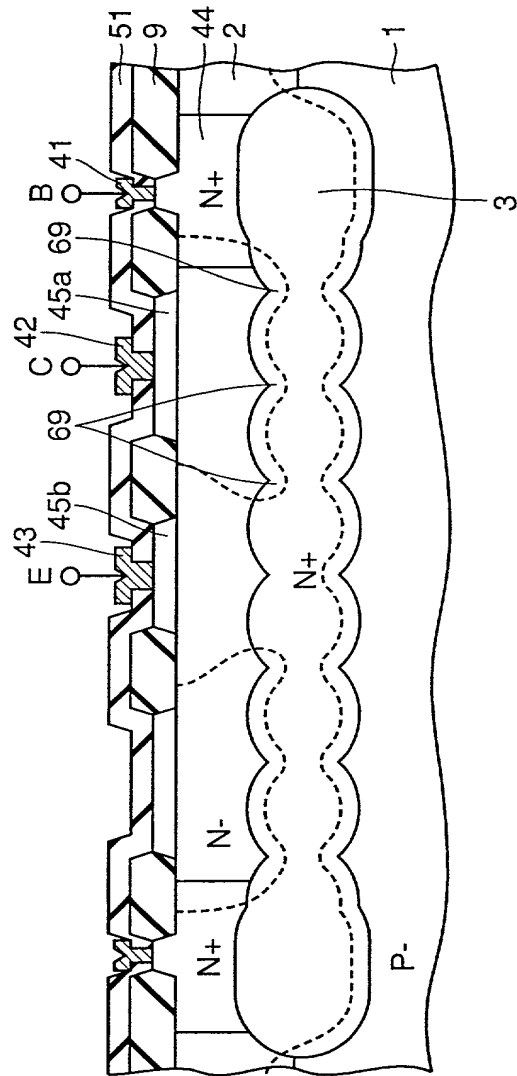


FIG. 30 PRIOR ART

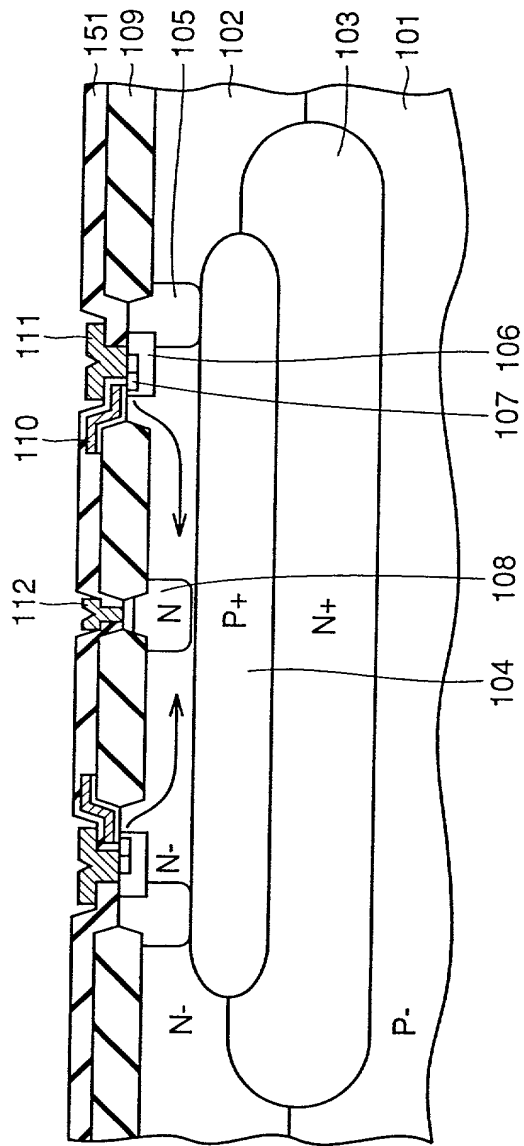


FIG. 31 PRIOR ART

